

Application No.: 09/118,833

**REMARKS**

This Preliminary Amendment is to the CPA filed May 10, 2001. No new matter is believed to be added to the application by this Amendment.

***Status of the Claims***

Claims 4-20 are pending in the application. Claims 18-20 are newly added. Support for the "co-sintered" limitation can be found at pages 3, 5 and 6 of the specification. The amendments to claim 12 incorporate the subject matter of claim 4. The amendments to claim 14 incorporate the subject matter of claim 6. The amendments to claim 16 incorporate the subject matter of claim 8. Newly added claims 18, 19 and 20 are supported by the subject matter of claims 5, 7 and 9, respectively.

***Interview with the Examiner***

Applicants thank the Examiner for kindly assenting to an Interview on May 10, 2001. The contents of the Interview Summary have been reviewed, and the Examiner's comments appear to accurately reflect the content of the Interview.

***Rejection Under 35 U.S.C. § 103(a) Over Soma '767***

The claims of the invention remain rejected under 35 U.S.C. § 103(a) Over Soma '767 (USP 5,411,767). Applicants maintain

traverse of this rejection and respectfully request reconsideration and withdrawal thereof.

The independent claims of the invention pertain to a solid electrolyte fuel battery (and method of making fuel a battery) that contains a co-sintered interconnector. In contrast, Soma '767 pertains to an interconnector for a solid electrolyte-type fuel cell that is formed by thermal spraying. The fundamental differences between the interconnector of Soma '767 and the interconnector of the present invention would fail to motivate a person having ordinary skill in the art to produce an embodiment of the instantly claimed present invention sufficient to produce a *prima facie* case of obviousness. Additionally, the principal of operation of Soma '767 would necessarily be changed in order to produce an embodiment of the present invention. As a result, there are at least two separate and independent grounds demonstrating the failure of Soma '767 to produce *prima facie* obviousness. These grounds are discussed in fuller detail in the previous responses.

Further, even if it is assumed *arguendo* that Soma '767 is sufficient to produce *prima facie* obviousness, the present invention shows unexpected results over the prior art. These unexpected results are set forth in the Declaration Under 37 C.F.R. § 1.132 by Toshiro Nishi filed on February 12, 2001.

The results set forth in the Declaration compares the fuel cell prepared by the sintering process of the present invention to

a fuel cell prepared by a thermal spraying process such as is taught by Soma '767. The results demonstrate that the sintering process of the present invention contains substantial economic advantages over the thermal spraying process of Soma '767 as is shown in the Table at page 4 of the Declaration. As a result, the advantages of the present invention are clear.

As has been shown, the teachings of Soma '767 are insufficient to assert a *prima facie* case of obviousness. Further, the unexpected results fully rebut any assertion of *prima facie* obviousness that can be made. Accordingly, Applicants believe that withdrawal of this rejection under 35 U.S.C. § 103(a) is proper, and the application stands in condition for allowance.

### **Conclusion**

If the Examiner has any questions concerning this application, he is requested to contact Robert E. Goozner, Reg. No. 42,593, at (703) 205-8000 in the Washington, D.C. area.

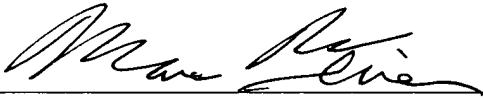
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

Application No.: 09/118,833

required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17;  
particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made



Application No.: 09/118,833

**VERSION WITH MARKING TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

The claims have been amended as follows:

6. (Amended) A solid electrolyte type fuel battery in which [an] a co-sintered interconnector for connecting cells of the solid electrolyte type fuel battery comprises a material having a matrix of the general formula  $A_{1-x}B_xC_{1-y}D_yO_3$  where A is Ca, Sr or Ba, B is a rare earth element, aluminum or chromium, C is titanium, D is niobium or tantalum,  $0 < x \leq 0.2$  and  $0 \leq y \leq 0.2$ .

8. (Amended) A solid electrolyte type fuel battery in which [an] a co-sintered interconnector for connecting cells of the solid electrolyte type fuel battery comprises a material having a matrix of the general formula  $A_{1-x}B_xC_{1-y}D_yO_3$  where A is Mg, B is a rare earth element, aluminum or chromium, C is titanium, D is niobium or tantalum,  $0 < x \leq 0.2$  and  $0 \leq y \leq 0.2$ .

12. (Amended) A method of making [the solid electrolyte type fuel battery of claim 4, which comprises] a solid electrolyte type fuel battery in which an interconnector for connecting cells of the solid electrolyte type fuel battery is of a co-sinter type, and comprises a material having a matrix of the general formula  $MTiO_3$  where M is Mg, Ca, Sr, or Ba,

said method comprising:

integrally burning within said battery the interconnector for connecting cells of the solid electrolyte type fuel battery.

14. (Amended) A method of making [the solid electrolyte type fuel battery of claim 6, which comprises] a solid electrolyte type fuel battery in which a co-sintered interconnector for connecting cells of the solid electrolyte type fuel battery comprises a material having a matrix of the general formula  $A_{1-x}B_xC_{1-y}D_yO_3$  where A is Ca, Sr or Ba, B is a rare earth element, aluminum or chromium, C is titanium, D is niobium or tantalum,  $0 < x \leq 0.2$  and  $0 \leq y \leq 0.2$ ,

said method comprising:

integrally burning within said battery the interconnector for connecting cells of the solid electrolyte type fuel battery.

16. (Amended) A method of making [the solid electrolyte type fuel battery of claim 8, which comprises] a solid electrolyte type fuel battery in which a co-sintered interconnector for connecting cells of the solid electrolyte type fuel battery comprises a material having a matrix of the general formula  $A_{1-x}B_xC_{1-y}D_yO_3$  where A is Mg, B is a rare earth element, aluminum or chromium, C is titanium, D is niobium or tantalum,  $0 < x \leq 0.2$  and  $0 \leq y \leq 0.2$ ,

said method comprising:

integrally burning within said battery the interconnector for connecting cells of the solid electrolyte type fuel battery.

The following claims have been newly added:

--18. The method of claim 12, wherein the current passage of the interconnector is current collection in the vertical direction.--

--19. The method of claim 14, wherein the current passage of the interconnector is current collection in the vertical direction.--

--20. The method of claim 16, wherein the current passage of the interconnector is current collection in the vertical direction.--